

What is claimed is:

1. A railway car for transporting automobiles, said car comprising a floor, a roof, a pair of upstanding side walls, and a pair of end doors for selectively enclosing an end of said railway car;

5 each of said end doors having an inner edge and an outer edge;

said doors being movable between a closed position in which the doors substantially enclose an end of the car, and an open position permitting access to the
10 interior of the car;

each of said end doors extending generally vertically between the floor and the roof, and having a top portion which extends longitudinally inward in overlapping relation with the roof.

2. A railway car in accordance with claim 1 wherein said top portion of each of said end doors is disposed above the roof.

3. A railway car in accordance with claim 1 wherein said top portion is pivotally connected to the roof.

4. A railway car in accordance with claim 1 wherein said top portion of each end door extends approximately from the centerline of the car to the side wall of the car.

5. A railway car in accordance with claim 1 wherein said top portion is substantially solid and rigid to provide security for said car by preventing persons from gaining access to the interior of said car at the upper ends of said end doors.

6. A railway car in accordance with claim 1 wherein said top portion is substantially impermeable to air, to restrict airflow into said car at the upper ends of said end doors.

7. A railway car in accordance with claim 1 further comprising a pair of flexible closure members, each of said flexible closure members having a first

portion attached to one of said end doors, and a second portion attached to one of the side walls, to restrict airflow into said car about the outer edges of the end doors.

8. A railway car in accordance with claim 7 wherein said first portion of each of said flexible closure members is attached to the outer edge of its associated end door.

9. A railway car in accordance with claim 1 further comprising means for restricting airflow between the end doors when they are in closed position.

10. A railway car in accordance with claim 1 wherein each of said end doors includes a flexible inner edge seal member extending along its inner edge to restrict airflow into said railway car between said end doors.

11. A railway car for transporting automobiles, said car comprising a floor, a roof, a pair of upstanding side walls, a pair of end doors, and at least one upper deck spaced above the floor of the car so that automobiles may be supported on at least two levels;

each of said upstanding side walls comprising a plurality of substantially vertical posts supporting said intermediate deck and roof;

a plurality of side wall panels connected to said substantially vertical posts;

said side wall panels functioning as shear plates to tie the said vertical posts together and to bear substantial loads in the plane of said side wall.

12. A railway car in accordance with claim 11 wherein each of said side wall panels extends substantially the entire height of the side wall.

13. A railway car in accordance with claim 11 wherein each of said posts comprises an outwardly opening channel and a pair of flanges parallel to the plane of the side wall.

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14. A railway car in accordance with claim 13 wherein each of said side wall panels comprises a steel plate having a first edge rigidly attached to a flange of one of said posts, and a second edge rigidly attached to 5 a flange of another of said posts.

15. A railway car for transporting automobiles comprising a floor, a roof, a pair of upstanding side walls, and a pair of end doors, and at least one intermediate deck structure for supporting automobiles above 5 the floor of said car, to define at least two levels in said railway car;

each of said side walls having groups of perforations therein,

said groups of perforations being concentrated 10 at predetermined areas along the top and bottom of each level to provide passive light and ventilation for workers on each level on the interior of the car.

16. A railway car in accordance with claim 15 wherein each side wall comprises a plurality of panels extending substantially the full height of the side wall.

17. A railway car in accordance with claim 15 wherein said groups of perforations are concentrated near the longitudinal center of the car, with imperforate regions being provided adjacent the end doors of the cars.

18. A railway car in accordance with claim 15 wherein each of said perforations has a substantially circular configuration and has a diameter of about 7/8 in.

19. A railway car for transporting automobiles, said car comprising a roof, a floor, a pair of upstanding side walls, a pair of end doors, and at least one upper deck spaced above the floor of the car so that automobiles 5 may be supported on at least two levels;

said railway car further comprising a plurality of door edge protection strips attached to interior surfaces of the side walls on each level;

each of said door edge protection strips 10 extending generally horizontally;

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15 said plurality of door edge protection strips on each level being vertically spaced from one another and being disposed substantially parallel to one another to provide door edge protection for absorbing impacts from doors of vehicles of various sizes which may be transported in said railway car on said at least one level.

20. A railway car in accordance with claim 19 wherein each of said door edge protection strips has a plurality of recessed portions extending along its interior surface.

5 21. A railway car in accordance with claim 20 wherein each of said door edge protection strips has a plurality of openings formed in said recessed portions to accommodate fasteners for attaching said door edge protection strips to the side walls of the railway car.

22. A railway car in accordance with claim 19 wherein each of said door edge protection strips comprises an extrusion.

23. A railway car in accordance with claim 19 wherein each of said door edge protection strips is made of a plastic material.

5 24. A railway car in accordance with claim 19 wherein each of said door edge protection strips has a plurality of elongated slots formed therein to accommodate fasteners for securing the door edge protection strips to the side walls of the railway car.

25. An articulated railway car for transporting automobiles comprising:

first and second car units pivotally joined to each other;

5 5 said first car unit comprising a roof, a floor, and a pair of upstanding side walls extending generally upward from the floor to the roof;

10 said second car unit comprising a roof, a floor, and a pair of upstanding side walls extending generally upward from the floor to the roof;

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each of said first and second car units having an end adjacent the other of said first and second car units;

15 the side walls and roof of each of said car units being spaced from those of the other unit to define a gap therebetween;

a flexible enclosure for covering the gap between the respective car units;

20 the flexible enclosure comprising one or more integral flexible members having a first end attached to said first car unit and a second end attached to said second car unit.

26. An articulated railway car in accordance with claim 25 wherein said flexible enclosure comprises a roof member extending from the roof of the first unit to the roof of the second unit, and first and second side 5 wall members extending horizontally from the respective side walls of the first unit to those of the second unit, said first and second side wall members being joined to said roof member.

27. An articulated railway car in accordance with claim 26 wherein each of said roof member and said side wall members is of a pleated configuration.

28. An articulated railway car in accordance with claim 27 wherein each of said members comprises a steel wire mesh embedded into a polymer matrix.

29. An articulated railway car in accordance with claim 25 wherein the flexible enclosure further comprises portions extending from the first car unit to the second car unit beneath the floors of the respective 5 car units.

30. An articulated railway car in accordance with claim 25 wherein each of said members of said flexible enclosure comprises a two-ply wire fabric, comprising a first layer having wires oriented in a first 5 direction embedded therein, and a second layer having wires oriented generally perpendicularly to said first

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direction, each of said layers being an integral member extending from one car unit to the other.

31. In a railway car for transporting automobiles having a galvanized steel roof, the improvement comprising a polymeric coating on said roof.

32. The improvement of claim 31 wherein said polymeric coating is applied to substantially the entire surface area of said roof, including both the upper and lower surface thereof.

33. The improvement of claim 31 wherein said polymeric coating comprises a polyvinyl chloride material.

34. A railway car for transporting motor vehicles, said railway car comprising a roof, a floor, a pair of upstanding side walls, and a pair of end doors for selectively enclosing an end of said railway car;

5 each of said end doors having an inner edge and an outer edge;

 said doors being movable between a closed position in which the doors substantially enclose an end of the car, and an open position permitting access to the
10 interior of the car;

 said railway car further comprising a pair of flexible closure members, each of said flexible closure members having a first portion attached to one of said end doors, and a second portion attached to one of said side
15 walls, to restrict air flow into said car between the outer edge of the end door and the side wall when said doors are in closed position.

35. A railway car in accordance with claim 34 wherein each of said flexible closure members remains attached to its associated end door and side wall when said end door is in open position.

36. A railway car in accordance with claim 35 wherein each of said flexible closure members is made of a fabric material.

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37. A railway car for transporting automobiles, said car comprising a floor, a roof, a pair of upstanding side walls, and a pair of end doors; each of said end doors having an inner edge and 5 an outer edge; said doors being movable being a closed position in which the doors substantially enclose an end of the car, and an open position permitting access to the interior of the car;

10 each of said end doors comprising a flexible inner edge seal member extending along the inner edge of the door to restrict air flow into the railway car between said end doors when said end doors are in closed position.

38. A railway car in accordance with claim 37 wherein each of said seal members comprises a flange portion attached to its associated door, and an extension which is joined to the flange at an obtuse angle so as to 5 extend inward toward the opposite door and toward the interior of the railway car.

39. A railway car in accordance with claim 38 wherein each of said seal members is deformed by an opposite seal member when the doors are in closed position.

40. A railway car in accordance with claim 39 wherein each of said seal members includes an inner edge portion which is joined to said extension at an obtuse angle.

41. A railway car for transporting motor vehicles, said railway car comprising a floor, a roof, a pair of upstanding side walls, and a pair of end doors for selectively enclosing an end of the railway car; 5 each of said end doors having at least one roller rotatably mounted thereon; said railway car further comprising a pair of tracks, one for each end door; each said track being positioned to support said 10 at least one roller on its associated end door;

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each of said tracks having substantially the same configuration as the other so that said tracks are interchangeable.

42. A railway car in accordance with claim 41 wherein each of said tracks is provided with a substantially uniform radius of curvature over substantially its entire length.

43. A railway car in accordance with claim 42 wherein each said track has an inverted L-shaped cross section.

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